Geographic Variation in the Distribution of Wealth in the United States in 1870

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Abstract

We use data from the 1870 IPUMS sample of the US Population Census to analyze patterns of spatial variation in the distribution of wealth. Consistent with Kuznets' conjecture that industrialization was associated with rising inequality in the nineteenth century, we find that across states inequality was positively correlated with measures of industrialization. But we also find that inequality was high in the South, even though it remained in 1870 highly rural and agricultural. This exception is explained, however, by the legacy of slavery, which apparently permitted the emergence during the antebellum period of a much more unequal distribution of property than occurred in the North. This inequality managed to survive after the Civil War despite the strong negative effect of emancipation on overall levels of wealth holding in the South.

1. Introduction

The federal censuses of 1850, 1860 and 1870 offer a rare glimpse of patterns of property ownership in the United States during the nineteenth century. In 1850 census enumerators gathered information on the value of real property and in 1860 and 1870 they collected data on the value of both real and personal property holdings of every individual. These mid-century data offer a snapshot of wealth holding prior to the late nineteenth century acceleration of industrialization. In the past a number of studies have made use of these data to explore a variety of issues related to wealth accumulation and inequality in the nineteenth century. These earlier efforts have been based, however, on relatively small samples or focused on particular groups.[1]

In this paper we make use of the much larger sample available in the Integrated Public Use Microdata Series (IPUMS) sample of the 1870 census to examine the

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[1] Soltow (1975) contains a relatively comprehensive discussion of wealth accumulation and distribution based on a national sample of census returns at all three dates. Steckel (1990) used a sample of about 1,500 observations matched from the 1850 to 1860 censuses to examine wealth accumulation in the 1850s, and Ferrie (1999) used samples of immigrants and natives in 1850 and 1860 to trace the impact of changes in occupation and location and wealth accumulation. Atack and Bateman (1981) analyzed wealth accumulation over the life-cycle based on a sample of approximately 21,000 rural northern households in 1860.

distribution of wealth at a relatively disaggregated level. The large size of this sample allows us to look both at spatial patterns of variation and at inter-group differences in the level of inequality. Looked at in this way, we find pronounced patterns of variation in inequality across regions and within regions. Soltow (1975) had noted that wealth was much more unequally distributed in the South than elsewhere. While our results are consistent with this conclusion, they also suggest that there were substantial variations in inequality both within the South and within other parts of the country. Indeed, our calculations show that levels of inequality in Southern New England were as high, or higher, than in most Southern states, and substantially greater than those found in northern New England. Inequality was also high in the Pacific and Mountain regions. On the other hand, we show that the distribution of wealth was substantially more equal in the North Central region than elsewhere in the country.

Decomposing wealth inequality by race, residence, occupation, nativity and age, we find that inequality was higher in urban than rural areas, higher among Blacks than Whites, and varied with occupation and age. Not surprisingly equality was greatest among farmers, but we also find relatively low levels of inequality among professionals, and clerical and kindred workers, while those in sales occupations displayed the highest level of inequality. Breaking the data down by age we show, consistent with Atack and Bateman's(1981) results for rural households, that inequality was highest among the young, and declined for successively older groups. In contrast to these between group differences, however, we find that there was little difference in inequality between the native born and the foreign born in 1870.

Beginning with Kuznets (1955), economic historians have been concerned with the relationship between inequality and economic development. In his seminal article

Kuznets conjectured that income inequality was higher in the urban and industrial sectors of the economy than in the rural and agricultural sectors, and demonstrated that under this assumption the movement of population from the agricultural to the industrial sector would (other things equal) be expected to cause inequality to increase during the early stages of industrialization. Williamson and Lindert (1980) have argued that movements of pay ratios in the nineteenth century United States are consistent with this conjecture. More recently Steckel and Moehling (2001) have compiled wealth data for a single state, Massachusetts, that reveal an upward trend in inequality from 1800 to the early twentieth century.

The cross-sectional patterns of variation that we observe in 1870 can shed additional light on these hypotheses. In 1870, the process of industrialization was substantially more advanced in some states than in others. Using across-state variations in inequality it is possible to explore the relationship between a variety of state demographic characteristics and the level of inequality. In the final section of this paper we describe a series of cross-state regressions. We find that a small set of state-level characteristics can account in a statistical sense for a large fraction of the across state variation in inequality levels. Obviously the resulting regression coefficients cannot be assumed to be equal to those we would obtain in a true time series regression, but they do indicate that, consistent with Kuznets' original conjecture, higher levels of urbanization and industrialization were both associated with increased inequality. We also find a pronounced effect of slavery's legacy on inequality. Across the southern states, wealth inequality displayed a high degree of correlation with the share of Blacks in the state population.

2. Characteristics of the Data

The 1870 census IPUMS contains a 1 percent random sample of the population drawn from the original census manuscripts. In total there are 383,308 individuals in the data set, with a combined aggregate wealth of $250.7 million. Many of these individuals were part of larger households, whose assets were likely to be reported as belonging to the head of the household. Analyzing wealth distribution across individuals thus may produce misleading results about the concentration of property ownership. Therefore, in the subsequent analysis we focus on wealth holding of male heads of household.[2] This group accounted for 66,825 (17%) of the observations in the IPUMS data, but owned about 83 percent of the reported wealth.

The information on the value of real and personal property collected by Census enumerators was self reported, and the instructions to enumerators recognized that "exact accuracy may not be arrived at, but all persons should be encouraged to give a near and prompt estimate for your information" (quoted in Soltow 1975, p. 1). The resulting figures are unlikely to be entirely accurate, but the discrepancies do not appear to create large systematic biases. Analysis of the distribution of reported values clearly reveals a tendency toward heaping on round numbers. This tendency to round may also have resulted in some censoring with individuals with small amounts of property simply reporting zero. Matching census manuscripts with tax lists, Steckel (1994) found that

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[2] Instructions to the enumerators specified that the household head's name should be entered first in the record for each family recorded, with other members following. It may be desirable eventually to broaden the analysis to consider all household heads, but initial examination of the data does not indicate that any of the results reported here would change substantially as a result of including female heads of household.

census wealth figures often exceeded taxable wealth levels, but that there was no systematic association between such discrepancies and socioeconomic variables such as age or occupation. He also reported that differences in Gini coefficients computed from the two sources were small and not statistically significantly different from each other.

Table 1 summarizes a number of the personal characteristics of the full census sample and subsets of all heads of household and the male heads of household that we focus on in the subsequent analysis. Comparing the samples, it is apparent that heads of household were on average considerably older than the population, and more likely to be foreign born. They were also much more likely to own any property, and their average wealth level was substantially higher than the population as a whole. In other respects, however, the samples appear quite similar. The proportion of urban dwellers was roughly similar in all three samples (about 25%), and the regional distributions also varied only slightly across samples.

3. An Overview of Wealth Accumulation in 1870

We begin our analysis of the census data on property holding by analyzing patterns of wealth accumulation in 1870. Columns 3 and 4 of Table 2 report, respectively, average levels of wealth and the fraction having any wealth among male heads of household by state and region. The highest levels of average wealth were in the Pacific region, reflecting the high average wealth of households in California. In the rest of the country, wealth levels were greatest in the Northeast. Average household wealth in the North Central region trailed the Northeast slightly. Average Wealth accumulation was substantially lower across most of the South, though property ownership in some of

the border states was considerably higher than the regional average. The low level of average wealth in this region presumably reflects the impact of the recent emancipation of the Black population. On the one hand, most of the recently freed slaves had had little opportunity to accumulate assets by 1870, while their former owners had suffered a substantial reduction in their asset holding as a result of the loss of slave property.

For the country as a whole, 71.4 percent of household heads reported a positive value of total property. This figure was considerably lower across the South, where regional values ranged from 53.1 percent in the South Atlantic to 63.2 percent in the East South Central. Across regions, there was a positive correlation between average wealth holding and the number of household heads with any wealth. A similar positive relationship is evident across states within the southern regions. On the other hand, in the North, higher average wealth levels were associated with lower shares holding any property.

To shed additional light on these regional variations in wealth accumulation we turn to individual level data. Table 3 reports the results of two cross-section regressions. In the first, we estimated a Probit regression where the dependent variable equaled 1 if the individual had positive wealth, and zero otherwise. The explanatory variables consist of dummy variables for race, nativity, major occupation groups and region, along with age and age-squared. The table reports the transformed coefficients showing the change in the probability of having any wealth as a result of a change in the independent variable

evaluated at the means of the independent variables.[3] In the second we restricted our sample to only those heads of household who reported a positive value for total wealth and used ordinary least squares to regress the natural logarithm of total wealth on the same set of personal characteristics.

With the exception of the dummy variable for the Pacific region all of the explanatory variables are statistically significant, and the equations appear to fit the data relatively well. For the most part, even after controlling for individual characteristics the regional patterns appear quite similar to those in Table 2.

The impacts of personal characteristics are generally consistent with our prior expectations. Reflecting the severe disadvantages of the newly emancipated slaves, Blacks were 37 percent less likely to report any property than were non-blacks, and those who did report having any wealth had only about one-third as much as non-blacks, other characteristics equal. The foreign born were also less likely to have any wealth, and those who did had less than their native born counterparts, though their disadvantages were considerably smaller than for Blacks. Compared to the left-out category of laborers, all of the other occupation groups were more likely to report some property, and to have higher levels of property. Farmers were the most likely to possess any property, and had among the highest levels of wealth as well. The coefficients on age and age squared indicate a concave relationship with both the probability of having any wealth and the level of wealth that individuals had. The probability of having any wealth peaks around age 55, while the level of wealth equation peaks at age 60.

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[3] For continuous variables the transformed coefficient is the slope of the probability function calculated at the means of the independent variables. For zero-one dummy

4. The Distribution of Wealth in 1870

Measuring Inequality

Following other recent work on the distribution of wealth, we use the Theil entropy measure to summarize the inequality of wealth (Steckel and Moehling 2001; Stutes 2004). Like the Gini coefficient the Theil entropy measure is an index based on the entire wealth distribution. The Theil measure is calculated as:

$$T = \frac{1}{n}\sum_{i=1}^{n}\frac{w_i}{\mu}\ln(\frac{w_i}{\mu}) \qquad (1)$$

where n represents the number of observations, w_i represents the wealth of individual i, μ represents the full sample mean wealth, and 0ln(0) is taken to be zero. In the case of perfect equality the index is equal to zero. When wealth is perfectly unequally distributed—one individual owns all the wealth—the index equals ln(n).

An attractive feature of the Theil index is that, unlike other inequality measures, it is linearly decomposable into components representing inequality between population subgroups and inequality within each of the subgroups. Thus it is possible to decompose the Theil index calculated across all observations into inequality measures within each state, plus a term reflecting the inequality of wealth distribution between states. Suppose there are G population subgroups and let T_j be the Theil index calculated using equation (1) for individuals within subgroup j. Then the aggregate inequality can be rewritten as:

$$T = \sum_{j=1}^{G}\frac{n_j\mu_j}{n\mu}T_j + \sum_{g=1}^{G}\frac{n_j\mu_j}{n\mu}\ln\left(\frac{\mu_j}{\mu}\right) \qquad (2)$$

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variables we report the change in probability resulting from changing the value of the particular dummy variable from zero to one.

where n_j is the number of observations in subgroup j, μ_j is the mean wealth of subgroup j. Notice that the first term in each summation is the same and is equal to subgroup j's share of total wealth. Thus the first term in the decomposition is a weighted sum of the within subgroup inequalities where the weights are subgroup shares of total wealth. This is the measure of *within* group inequality. The second term is a weighted sum of the log of the ratios of subgroup average wealth to the mean wealth of the entire population. This is the measure of *between* group inequality.

Geographic Variation in Inequality

Tables 4 and 5 report the decomposition of inequality between states and regions, respectively. Both tables are laid out in the same way: the first column of the table shows the number of observations for the state or region, the second column shows the share of total wealth, the third column shows the ratio μ_i/μ, the fourth column shows the Theil index for the state or region, and the fifth and sixth columns show the contribution of the state or region to the within and between components of inequality at the national level.

As the tables make clear there were both pronounced regional variations in inequality and substantial variations within regions in 1870. The highest levels of inequality were found in the South Atlantic and the Pacific regions. While inequality was relatively high in the South Central regions it was higher in New England. At the other end of the spectrum the North Central regions were characterized by a substantially more equal distribution of wealth. But these broad regional patterns conceal striking within region variations. Notably, the northern New England states of Vermont, New

Hampshire and Maine had inequality levels on a par with those of farm states further west. Meanwhile the three southern New England states had levels of inequality that surpassed all but a few of the states in the South Atlantic region.

Despite the pronounced differences in average wealth across states, it is apparent that the dispersion of wealth within states was the dominant source of overall inequality. In terms of the Theil index formula, almost all of the national inequality figure is attributable to the within state component of inequality. Only 7 percent of the total figure is attributable to inequality between states. This conclusion is only reinforced when we look at the regional level.

Inequality within and Betweeen Population Subgroups

As we have already seen, average levels of wealth accumulation varied not only geographically, but by residence, race, nativity occupation, and age. Table 6 examines inequality within and between these different population subgroups, again using equation (2) to decompose variations in the aggregate inequality index into components attributable to wealth dispersion within and between groups.

Looking first at residence, we find that wealth inequality was much more pronounced among urban than rural residents. Turning next to race, the data indicate that despite their low average level of wealth, inequality was considerably higher among Blacks than it was among non-Blacks. Interestingly, differences in inequality between the native- and foreign-born were much smaller.

The occupational decompositions use the 1950 occupational categories which have been constructed in the IPUMS data by recoding the original occupation titles. As

we might have supposed inequality was lowest among farmers, but it is somewhat surprising to discover that property ownership was more equally distributed among the white collar occupational categories (professionals, managers, and clerical and kindred workers) than it was among most of the blue collar occupations. The relatively high level of inequality in sales occupations is also intriguing.

Inequality also varied considerably by age, declining steadily from ages 20-29 through age 40-49, and then stabilizing. Thus it appears that for whatever reason, the accumulation of wealth over the course of the life cycle was accompanied by a tendency for wealth holding to become more equitably distributed.

5. The Correlates of Geographic Variation in Inequality

Two important points emerge from examining wealth inequality at a relatively disaggregated level. The first is that there were pronounced regional variations in inequality, while the second is that there were also pronounced variations across population subgroups. To some extent these phenomena may be two sides of the same coin, since population characteristics varied a great deal across states and regions. Over the course of the nineteenth century the process of economic transformation that accompanied American industrialization proceeded at different rates. Industrialization began much earlier in New England and the Mid Atlantic regions, than in North Central and southern regions. Thus, by 1870, close to 70 percent of the population in Massachusetts and Rhode Island lived in urban places, more than three times the national average of 22 percent; while over 20 percent of the labor force was employed in manufacturing, compared to only a little more than 7 percent nationally. Industrialization

and urbanization were also closely linked to high rates of immigration, although many of the foreign born could also be found in more agricultural regions.

The cross-sectional variation in state characteristics thus offers the opportunity to examine the relationship between inequality and the structural changes in the economy that were associated with the process of industrialization during the nineteenth century. Of course, it is inappropriate to equate the results of such cross-section comparisons with genuine time-series observations. On the one hand it is possible that patterns of within group inequality changed over time. On the other hand, it is possible that there are interactions between states at a point in time—arising from interstate migration and trade—that cause cross-section and time series relationships to differ. Nonetheless, in the absence of time series data on inequality over the course of the century it is illuminating to explore the cross-section relationship.

Using the full IPUMS population sample for 1870 we have constructed measures of a number of demographic characteristics for each state. These include the fraction of the population that was Black, the fraction foreign born, the fraction listing their primary occupation in manufacturing, the fraction listing their primary occupation in farming, the fraction living in urban areas, and the average age of the population. Preliminary examination of these data suggests that several of these characteristics were highly correlated with one another. Nonetheless, it is possible to select a subset of characteristics that is not highly collinear across states.

Table 7 reports the results of several different OLS regression specifications where the dependent variable is the Theil inequality measure calculated at the state level. In these regressions we have dropped the four smallest states (those with less than 100

heads of household in the 1870 IPUMS sample) to reduce errors arising from very small sample sizes. Based on fit, model 4 is our preferred specification. The five explanatory variables included here account for almost 2/3 of the variation in the dependent variable. The resulting coefficient estimates seem sensible to us, and most of the coefficients are statistically as well as economically significant.

The first point to emerge from the estimates is the significant impact of the legacy of slavery. Using the proportion of Blacks in the population as a proxy for the impact of slavery, it is clear that inequality was substantially higher in those places with a greater proportion of Blacks. Indeed a one standard deviation increase in the proportion of Blacks in the population is associated with a 0.41 increase in the state inequality index.[4]

It is worth noting that although both a regional dummy for southern states and the fraction of Blacks in the population are statistically significant when entered alone, when both are included the coefficient on the South dummy falls substantially and becomes statistically insignificant (see Model 2). This indicates that variations in inequality within the South are the main factor identifying the effect of the proportion Black on inequality, rather than interregional differences in inequality. This effect is statistically highly significant in every specification and becomes stronger with the addition of other variables.

In addition to the legacy of slavery, the regressions also indicate that higher levels of urbanization and manufacturing employment also increased inequality, although the coefficient on urbanization is not statistically significant in all specfications. A one standard deviation increase in manufacturing employment would cause a 0.35 increase in

the state inequality index. After controlling for urbanization and manufacturing employment the effects of immigration are small, negative and not statistically significant. The coefficient on average wealth indicates that inequality also tended to increase with rising wealth, suggesting that this may have been another mechanism through which industrialization contributed to rising levels of inequality over time. The coefficient on the average age of the population is negative and statistically significant, reflecting the previously noted tendency for inequality to diminish in older age groups. The estimated magnitude implies that a one standard deviation increase in average age would cause inequality to fall by 0.22, a relatively large effect.

6. Conclusions

Information on real and personal property ownership collected in the federal population censuses of 1850 through 1870 offer one of the few opportunities to study patterns of wealth accumulation and inequality in the nineteenth century United States. While a number of earlier studies have made use of relatively small or selective samples of these data, the availability of the IPUMS one percent sample offers the opportunity to explore these data in much greater detail than has heretofore been possible. In particular, the larger sample size makes it possible to disaggregate the data in a variety of ways.

In this paper we have examined variation in inequality within and between states, regions, and important population groups. The results indicate that there were systematic variations in inequality that help us to understand rising levels of inequality associated with industrialization. In particular, we find that in cross-section inequality was

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[4] The unweighted mean of the state inequality indexes for the observations included in

positively correlated with a number of markers of increasing industrialization. In contrast, more agricultural states enjoyed greater equality of property holding. The exception to this rule is, of course, the South, which remained in 1870 highly rural and agricultural. This exception is explained, however, by the legacy of slavery, which apparently permitted the emergence during the antebellum period of a much more unequal distribution of property than occurred in the North. This inequality managed to survive after the Civil War despite the strong negative effect of emancipation on overall levels of wealth holding in the South.

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the regression is 1.49, so this is almost a 30 percent increase relative to the sample mean.

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Table 1: Summary Statistics, 1870 IPUMS and Selected Sub-Samples

	All Observations	Heads of Household	Male Heads of Household
Personal Characteristics			
Average Age	23.53	42.34	41.77
Male	50.36%	88.43%	100.00%
Black	12.63%	12.57%	11.69%
Foreign Born	14.37%	25.36%	26.08%
Head of Household	19.71%	100.00%	100.00%
Urban Location	25.20%	25.51%	24.75%
Occupation			
Farmer	16.10%	46.95%	52.09%
Employed in Manufacturing	7.31%	19.87%	21.85%
Property Ownership			
Average Real Property	$444.08	$2,038.29	$2,141.29
Average Personal Property	$209.92	$919.73	$966.15
Average Total Property	$654.01	$2,958.02	$3,107.44
Having Any Property	15.58%	68.95%	71.36%
Geography			
New England	8.93%	9.56%	9.50%
Mid Atlantic	22.53%	22.96%	23.05%
East North Central	23.89%	23.43%	24.23%
West North Central	10.01%	9.56%	10.07%
Mountain	0.78%	1.01%	1.02%
Pacific	1.71%	1.98%	2.09%
South Atlantic	15.23%	15.02%	14.25%
East South Central	11.60%	11.08%	10.53%
West South Central	5.32%	5.39%	5.27%
Number of observations	383,308	75,567	66,825

Source: Ruggles, and Sobek et al. (2003).

Table 2: Average Value of Property Owned and Percentage Owning any Property, by State, 1870

Geography	Heads of Household		Average value of Property Owned	Share with any Property
	Number	Share		
New England	6,348	0.095	$4,036.31	0.713
Connecticut	966	0.014	$6,527.27	0.709
Maine	1,118	0.017	$2,132.44	0.843
Massachusetts	2,599	0.039	$4,038.91	0.619
New Hampshire	647	0.010	$3,409.40	0.794
Rhode Island	369	0.006	$4,880.76	0.678
Vermont	649	0.010	$3,742.82	0.808
Mid Atlantic	15,404	0.231	$4,117.74	0.721
New Jersey	1,636	0.024	$4,113.40	0.710
New York	7,837	0.117	$4,305.07	0.681
Pennsylvania	5,931	0.089	$3,871.40	0.778
East North Central	16,193	0.242	$3,737.73	0.827
Illinois	4,532	0.068	$4,218.80	0.814
Indiana	2,963	0.044	$3,359.65	0.838
Michigan	2,201	0.033	$3,447.77	0.833
Ohio	4,632	0.069	$4,023.89	0.819
Wisconsin	1,865	0.028	$2,800.84	0.859
West North Central	6,728	0.101	$3,075.84	0.853
Iowa	2,078	0.031	$3,567.17	0.888
Kansas	712	0.011	$2,163.22	0.837
Minnesota	829	0.012	$2,538.18	0.848
Missouri	2,840	0.042	$3,203.46	0.830
Nebraska	229	0.003	$2,172.79	0.887
North Dakota	2	0.000	$0.00	0.000
South Dakota	38	0.001	$1,103.95	0.816
South Atlantic	9,521	0.142	$1,511.79	0.531
Georgia	1,913	0.029	$913.02	0.524
Virginia	1,979	0.030	$1,463.22	0.485
Maryland	1,200	0.018	$2,612.13	0.573
South Carolina	1,259	0.019	$1,031.14	0.382
Florida	329	0.005	$757.57	0.462
District of Columbia	217	0.003	$3,295.85	0.535
Delaware	215	0.003	$5,839.63	0.730
North Carolina	1,696	0.025	$745.64	0.545
West Virginia	713	0.011	$2,572.44	0.802

Table 2 Continued

Geography	Heads of Household		Average value of Property Owned	Share with any Property
	Number	Share		
Alabama	1,641	0.025	$710.69	0.506
Kentucky	2,093	0.031	$2,565.57	0.755
Tennessee	1,885	0.028	$1,692.64	0.700
Mississippi	1,415	0.021	$1,033.84	0.502
West South Central	3,519	0.053	$1,116.95	0.580
Arkansas	829	0.012	$1,158.55	0.695
Louisiana	1,344	0.020	$936.63	0.432
Texas	1,346	0.020	$1,271.37	0.656
Mountain	682	0.010	$1,041.72	0.579
Arizona	20	0.000	$882.50	0.500
Colorado	88	0.001	$1,771.93	0.591
Idaho	38	0.001	$2,217.11	0.500
Montana	64	0.001	$1,114.69	0.453
Nevada	126	0.002	$1,272.14	0.524
New Mexico	167	0.002	$472.75	0.545
Utah	161	0.002	$876.34	0.783
Wyoming	18	0.000	$52.78	0.111
Pacific	1,396	0.021	$5,128.17	0.710
California	1,169	0.017	$5,624.52	0.685
Oregon	179	0.003	$2,704.75	0.860
Washington	48	0.001	$2,077.50	0.750
USA	66,825	1.000	$3,107.40	0.714

Source: Ruggles, and Sobek et al. (2003).

Table 3: Determinants of Property Ownership and Value of Property Owned, 1870

Variable	Mean	Std. Dev.	Probit for total property>0 Transformed coefficients dF/dx	Std. Err.	P>|z|	Regression of Log(total property) Conditional on total property>0 Coef.	Std. Err.	P>|t|
REGION[a]								
Mid Atlantic	0.2305		0.0349	0.0064	0.000	0.0693	0.0220	0.002
East North Central	0.2423		0.0840	0.0062	0.000	-0.0379	0.0218	0.083
West North Central	0.1007		0.0901	0.0070	0.000	-0.2127	0.0253	0.000
South Atlantic	0.1425		-0.0869	0.0087	0.000	-0.7693	0.0260	0.000
East South Central	0.1053		-0.0316	0.0089	0.000	-0.7209	0.0271	0.000
West South Central	0.0527		-0.0575	0.0109	0.000	-0.8058	0.0339	0.000
Mountain	0.0102		-0.1236	0.0205	0.000	-0.6993	0.0651	0.000
Pacific	0.0209		0.0148	0.0129	0.257	-0.0111	0.0437	0.800
CHARACTERISTICS								
age	41.769	13.40	0.0204	0.0008	0.000	0.1071	0.0026	0.000
age squared	1924.3	1245.49	-0.0002	0.0000	0.000	-0.0009	0.0000	0.000
rural	0.2475		-0.0944	0.0053	0.000	0.2474	0.0172	0.000
black	0.1169		-0.3659	0.0079	0.000	-1.0986	0.0300	0.000
foreign born	0.2608		-0.0816	0.0049	0.000	-0.1936	0.0145	0.000
OCCUPATION[b]								
professional	0.0268		0.1796	0.0053	0.000	1.5841	0.0368	0.000
farmer	0.4093		0.3219	0.0042	0.000	1.4574	0.0193	0.000
manager	0.0641		0.2203	0.0032	0.000	1.9560	0.0270	0.000
clerical	0.0085		0.1297	0.0111	0.000	1.0157	0.0656	0.000
sales	0.0146		0.1338	0.0087	0.000	0.9583	0.0510	0.000
craft	0.1371		0.1355	0.0044	0.000	0.5837	0.0233	0.000
operative	0.0892		0.0820	0.0055	0.000	0.4050	0.0271	0.000
service	0.0126		0.1171	0.0099	0.000	0.5248	0.0606	0.000
miscellaneous	0.0243		0.0734	0.0093	0.000	1.6411	0.0436	0.000
_cons						3.5519	0.0616	0.000
N obs.			66825			47689		
obs. P			0.714					
pred. P			0.759	(at x-bar)				
Pseudo R-squared			0.2438					
R-Squared						0.3297		

[a] Excluded region is New England.
[b] Excluded occupation group is Laborers

Source: Ruggles, and Sobek et al. (2003).

Table 4: State Inequality Index Values, 1870

Geography	Number of Obs.	Share of wealth	μ_i/μ	Theil Inequality Index	National Inequality arising from: Within state inequality	National Inequality arising from: Between State Inequality
New England						
Connecticut	966	0.0304	2.1005	2.022	0.061	0.023
Maine	1,118	0.0115	0.6862	0.752	0.009	-0.004
Massachusetts	2,599	0.0506	1.2998	1.927	0.097	0.013
New Hampshire	647	0.0106	1.0972	1.035	0.011	0.001
Rhode Island	369	0.0087	1.5707	2.318	0.020	0.004
Vermont	649	0.0117	1.2045	0.839	0.010	0.002
Mid Atlantic						
New Jersey	1,636	0.0324	1.3237	1.405	0.046	0.009
New York	7,837	0.1625	1.3854	1.584	0.257	0.053
Pennsylvania	5,931	0.1106	1.2458	1.417	0.157	0.024
East North Central						
Illinois	4,532	0.0921	1.3576	1.436	0.132	0.028
Indiana	2,963	0.0479	1.0812	1.055	0.051	0.004
Michigan	2,201	0.0365	1.1095	1.006	0.037	0.004
Ohio	4,632	0.0898	1.2949	1.150	0.103	0.023
Wisconsin	1,865	0.0252	0.9013	0.826	0.021	-0.003
West North Central						
Iowa	2,078	0.0357	1.1479	0.804	0.029	0.005
Kansas	712	0.0074	0.6961	0.781	0.006	-0.003
Minnesota	829	0.0101	0.8168	0.923	0.009	-0.002
Missouri	2,840	0.0438	1.0309	1.581	0.069	0.001
Nebraska	229	0.0024	0.6992	0.642	0.002	-0.001
North Dakota	2	0.0000				
South Dakota	38	0.0002	0.3553	0.612	0.000	0.000
South Atlantic						
Delaware	215	0.0060	1.8792	1.720	0.010	0.004
District of Columbia	217	0.0034	1.0606	2.131	0.007	0.000
Florida	329	0.0012	0.2438	1.796	0.002	-0.002
Georgia	1,913	0.0084	0.2938	1.721	0.014	-0.010
Maryland	1,200	0.0151	0.8406	1.666	0.025	-0.003
North Carolina	1,696	0.0061	0.2400	1.512	0.009	-0.009
South Carolina	1,259	0.0063	0.3318	2.920	0.018	-0.007
Virginia	1,979	0.0139	0.4709	1.875	0.026	-0.011
West Virginia	713	0.0088	0.8278	1.751	0.015	-0.002

Table 4 Continued

Geography	Number of Obs.	share of wealth	μ_i/μ	Theil Inequality Index	National inequality arising from: Within state inequality	National inequality arising from: Between state Inequality
East South Central						
Alabama	1,641	0.0056	0.2287	1.732	0.010	-0.008
Kentucky	2,093	0.0259	0.8256	1.502	0.039	-0.005
Mississippi	1,415	0.0070	0.3327	1.924	0.014	-0.008
Tennessee	1,885	0.0154	0.5447	1.425	0.022	-0.009
West South Central						
Arkansas	829	0.0046	0.3728	1.859	0.009	-0.005
Louisiana	1,344	0.0061	0.3014	2.097	0.013	-0.007
Texas	1,346	0.0082	0.4091	1.288	0.011	-0.007
Mountain						
Arizona	20	0.0001	0.2840	1.277	0.000	0.000
Colorado	88	0.0008	0.5702	1.584	0.001	0.000
Idaho	38	0.0004	0.7135	1.675	0.001	0.000
Montana	64	0.0003	0.3587	1.242	0.000	0.000
Nevada	126	0.0008	0.4094	1.500	0.001	-0.001
New Mexico	167	0.0004	0.1521	2.096	0.001	-0.001
Utah	161	0.0007	0.2820	0.779	0.001	-0.001
Wyoming	18	0.0000	0.0170	2.267	0.000	0.000
Pacific						
California	1,169	0.0317	1.8100	2.144	0.068	0.019
Oregon	179	0.0023	0.8704	0.721	0.002	0.000
Washington	48	0.0005	0.6686	1.017	0.000	0.000
Total					1.446	0.109

Source: Ruggles, and Sobek et al. (2003).

Table 5: Regional Inequality Index Values, 1870

Region	Number of Obs.	share of wealth	μ_i/μ	Theil Inequality Index	National inequality arising from: Within region inequality	National inequality arising from: Between region inequality
New England	6,348	0.1234	1.2989	1.740	0.215	0.032
Mid Atlantic	15,404	0.3055	1.3251	1.506	0.460	0.086
East North Central	16,193	0.2915	1.2028	1.187	0.346	0.054
West North Central	6,728	0.0997	0.9898	1.166	0.116	-0.001
South Atlantic	9,521	0.0693	0.4865	2.022	0.140	-0.050
East South Central	7,034	0.0539	0.5119	1.666	0.090	-0.036
West South Central	3,519	0.0189	0.3594	1.696	0.032	-0.019
Mountain	682	0.0034	0.3352	1.560	0.005	-0.004
Pacific	1,396	0.0345	1.6503	2.061	0.071	0.017
Total					1.475	0.079

Source: Ruggles, and Sobek et al. (2003).

Table 6: Decompositions of Inequality by Residence, Occupation, Race, Nativity and Age, 1870

				National inequality arising from	
	Group share of wealth	μ_i/μ	Theil Inequality Index	Within group inequality	Between group inequality
By Residence					
Rural	0.6652	0.8840	1.232	0.819	-0.082
Urban	0.3348	1.3528	2.136	0.715	0.101
				1.534	0.019
By Occupation					
Professional	0.0506	1.8899	1.224	0.062	0.032
Farmers	0.4915	0.9495	1.069	0.526	-0.025
Managers	0.2323	3.6253	1.438	0.334	0.299
Clerical	0.0077	0.8964	1.347	0.010	-0.001
Sales	0.0205	1.4080	2.207	0.045	0.007
Craftsmen	0.0753	0.5495	1.370	0.103	-0.045
Operatives	0.0381	0.4271	1.731	0.066	-0.032
Services	0.0046	0.3613	1.684	0.008	-0.005
Laborers	0.0165	0.1565	1.790	0.029	-0.031
Not In Labor Force	0.0630	2.5960	1.755	0.111	0.060
				1.294	0.260
By Race					
Non-black	0.9951	1.1268	1.445	1.438	0.119
Black	0.0049	0.0420	2.478	0.012	-0.016
				1.450	0.103
By Nativity					
Native Born	0.7920	1.0714	1.522	1.205	0.055
Foreign Born	0.2080	0.7976	1.638	0.341	-0.047
				1.546	0.008
By Age					
0-9	0.0000	0.0003	0.000	0.000	0.000
10-19	0.0000	0.0003	0.000	0.000	0.000
20-29	0.0002	0.0473	2.339	0.001	-0.001
30-39	0.0606	0.3127	1.519	0.092	-0.070
40-49	0.1944	0.6883	1.359	0.264	-0.073
50-59	0.2931	1.2305	1.449	0.425	0.061
60-69	0.2521	1.5457	1.353	0.341	0.110
70-79	0.1516	1.8190	1.554	0.236	0.091
80-89	0.0475	1.4257	1.276	0.061	0.017
90 up	0.0003	0.5425	1.369	0.000	0.000
				1.419	0.134

Source: Ruggles, and Sobek et al. (2003).

Table 7: Regressions of State Level Inequality on State Characteristics, 1870

			Model 1			Model 2		
Independent Variable	Mean	Std. Dev.	Coef.	Std. Err.	P>|t|	Coef.	Std. Err.	P>|t|
South	0.400	0.496	0.5264	0.1508	0.0010	0.0798	0.2843	0.7810
black share	0.145	0.189				1.3651	0.7450	0.0750
urban share	0.226	0.195						
manufacturing share	0.203	0.134						
foreign born share	0.143	0.119						
average age	23.560	2.520						
average property per household head	2701.7	1562.6						
population	9552.4	9276.5						
constant			1.2811	0.0954	0.0000	1.2612	0.0932	0.0000
R-squared			0.240			0.306		
Adj. R-squared			0.223			0.268		

			Model 3			Model 4			Model 5	
Independent Variable	Coef.	Std. Err.	P>|t|	Coef.	Std. Err.	P>|t|	Coef.	Std. Err.	P>|t|
South									
black share	2.1950	0.4889	0.0000	2.5352	0.5402	0	2.5190	0.5460	0.0000
urban share	0.5881	0.4963	0.2440	0.3372	0.5214	0.522	0.3630	0.5280	0.4960
manufacturing share	2.7886	1.2675	0.0350	2.7598	1.2504	0.034	2.7800	1.2620	0.0350
foreign born share	-0.6907	0.7146	0.3410	-0.5127	0.7163	0.479	-0.5650	0.7280	0.4430
average age	-0.0681	0.0464	0.1510	-0.0757	0.0461	0.11	-0.0800	0.0470	0.0980
average property per household head				0.0001	0.0001	0.172	0.0000	0.0000	0.1470
population							0.0000	0.0000	0.5310
constant	2.1772	0.9466	0.0280	2.1290	0.9343	0.029	2.2560	0.9640	0.0260
R-squared	0.568			0.592			0.597	0.568	
Adj. R-squared	0.504			0.518			0.509	0.504	

Source: Ruggles, and Sobek et al. (2003)